

**FIG. 1**  
**(Prior Art)**

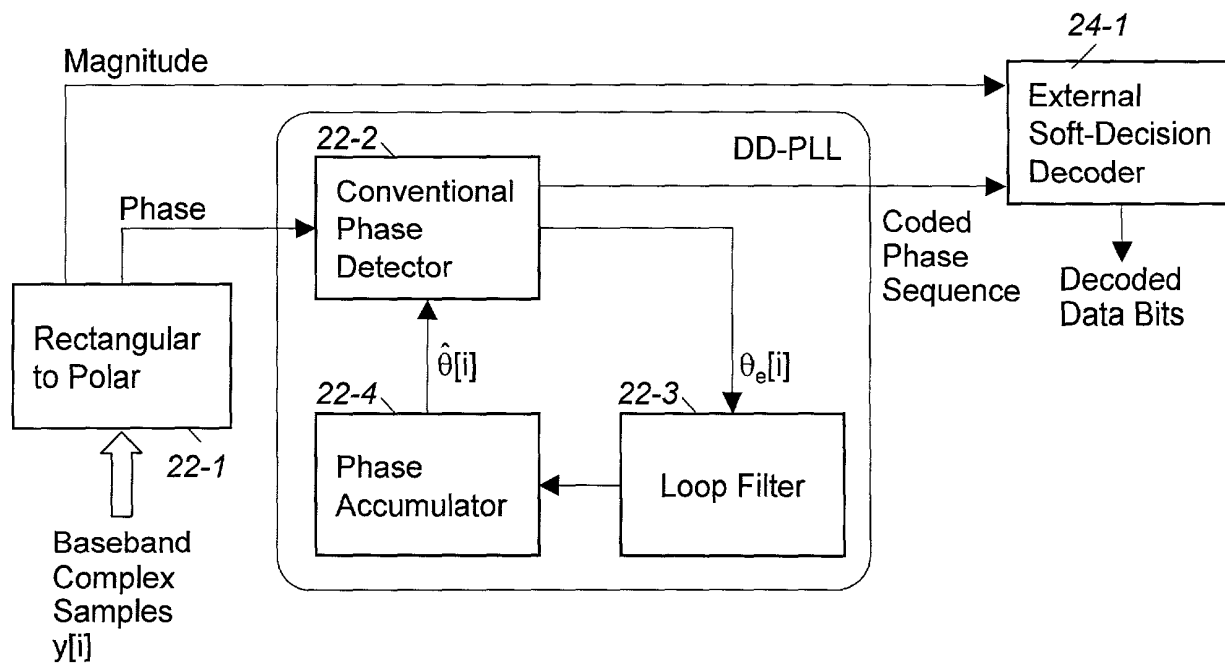


FIG. 2

Improved decision directed phase locked loop with the soft-decision decoder inside the phase detector

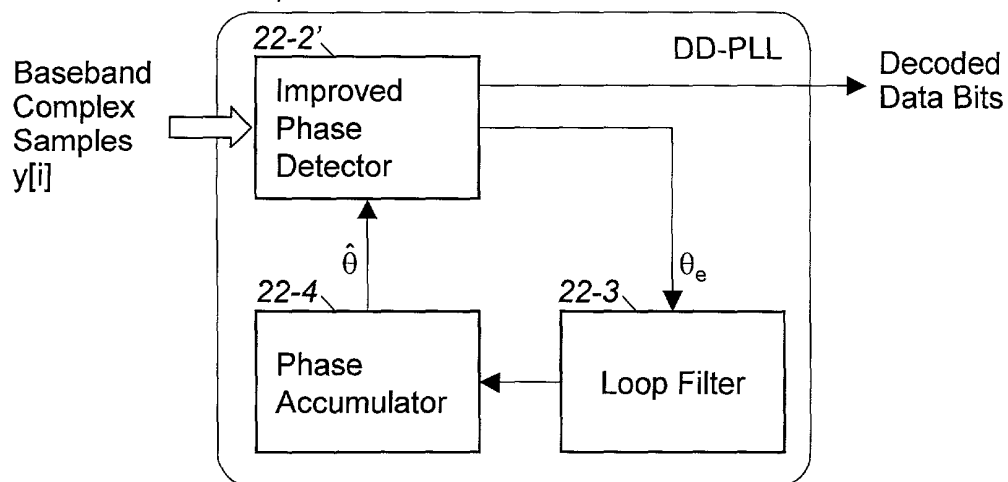
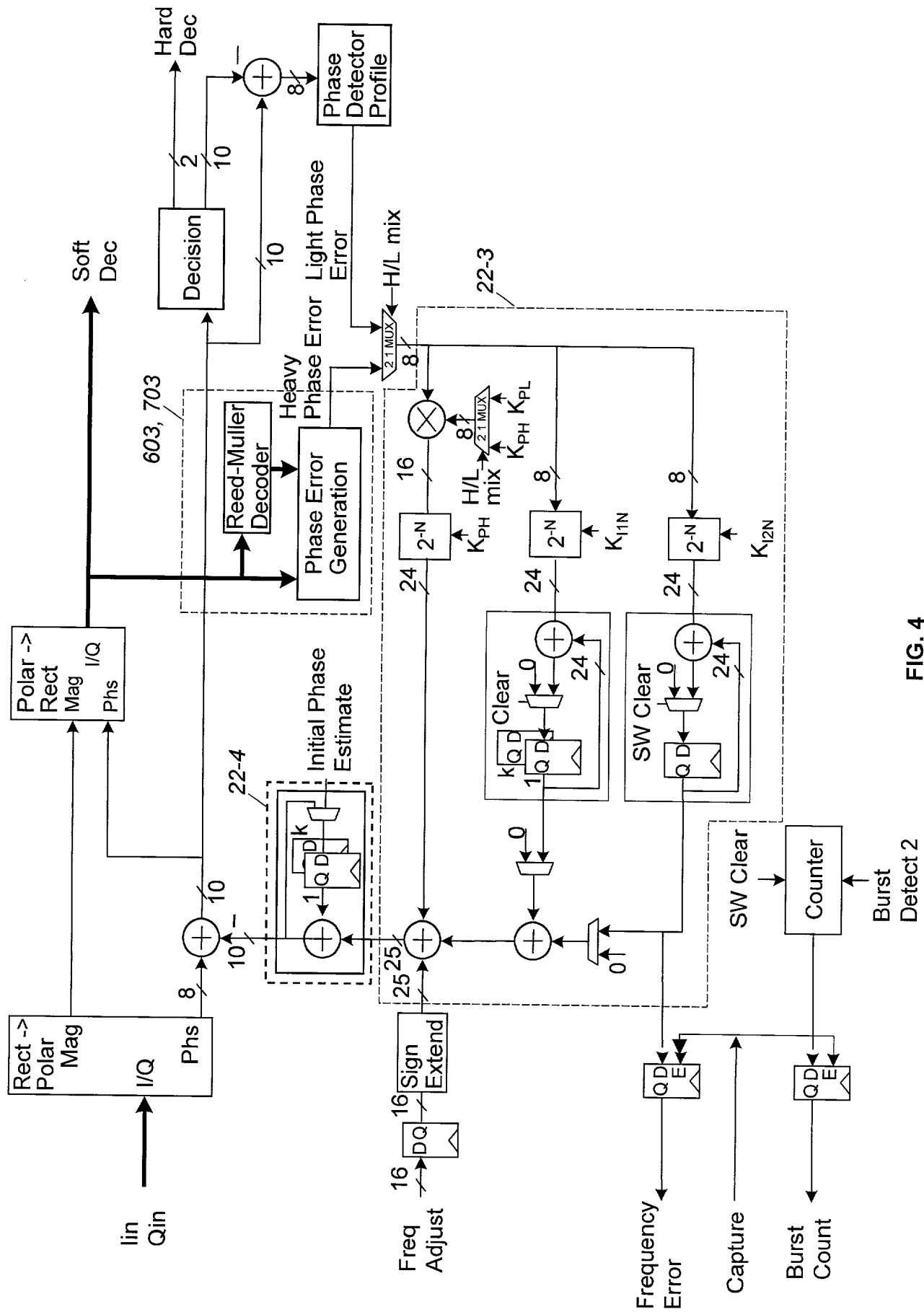
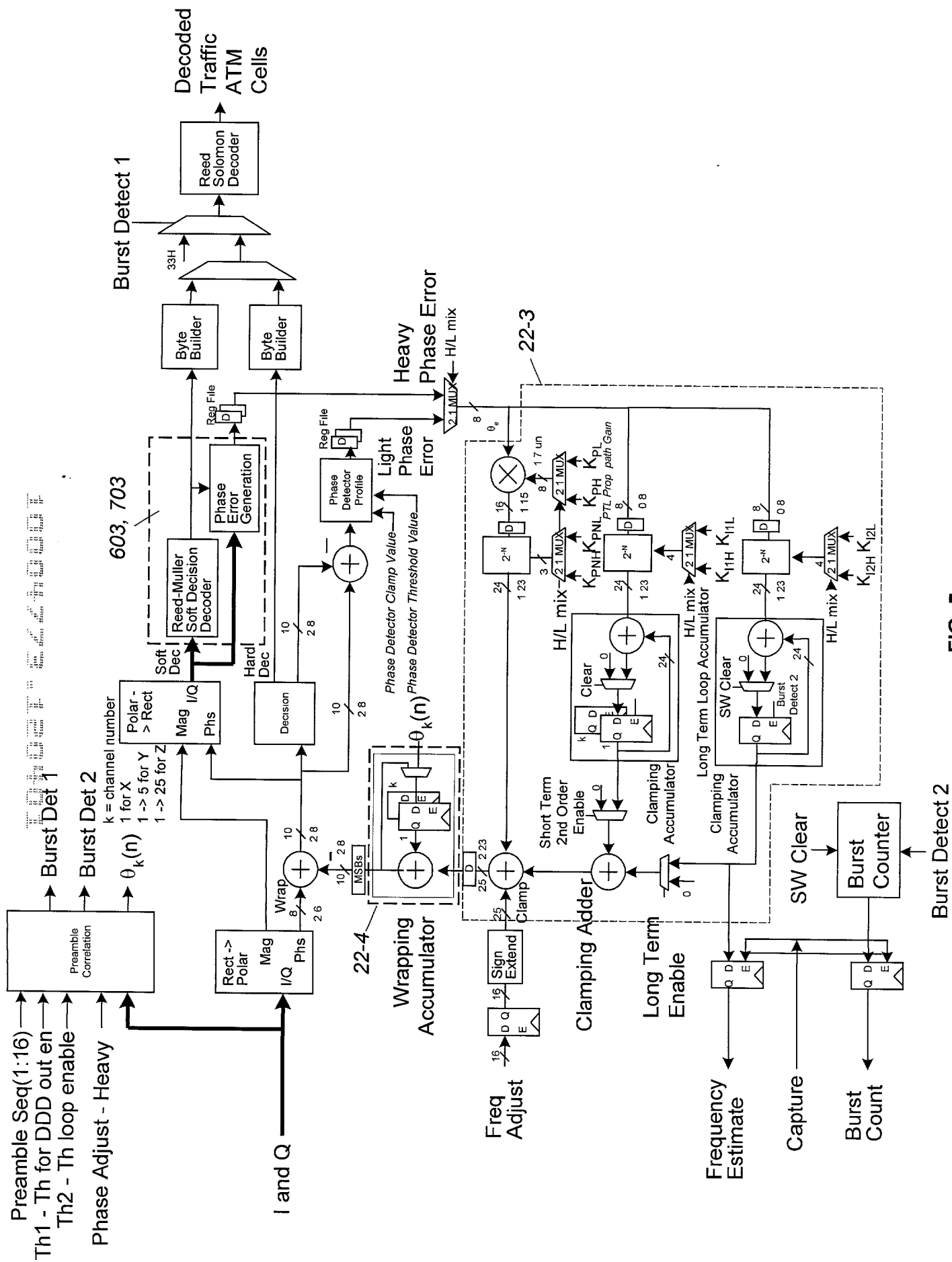


FIG. 3





**FIG. 5**

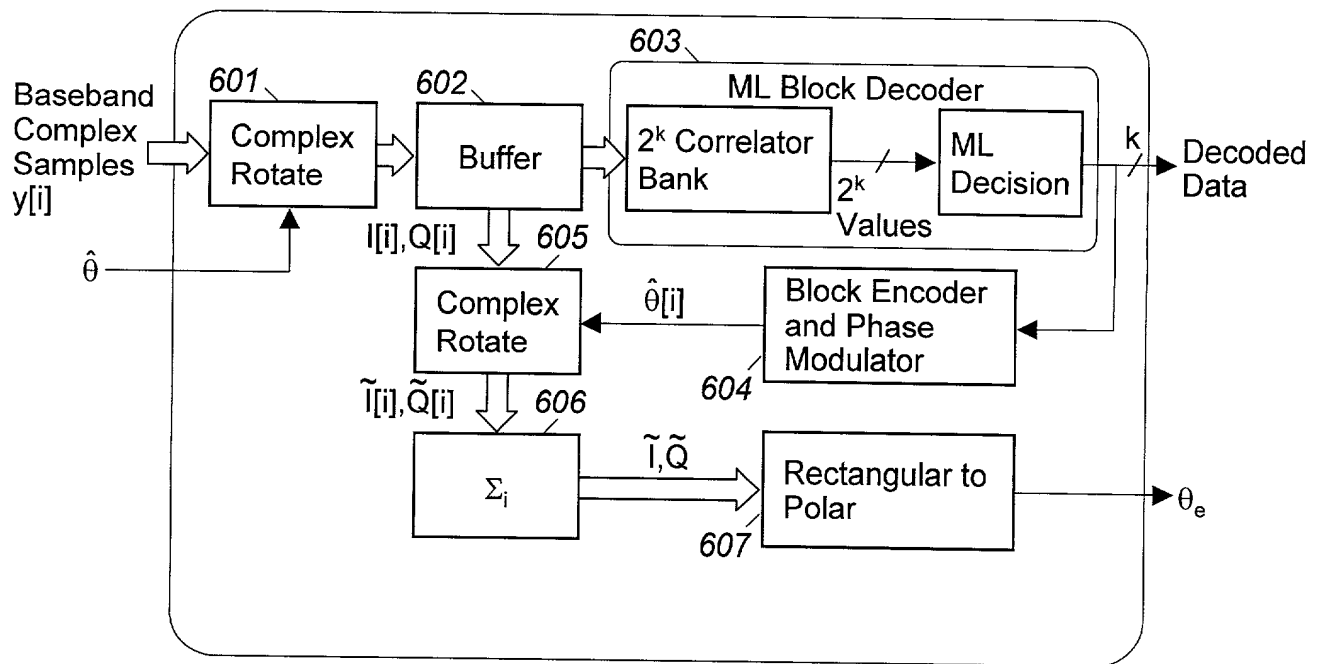


FIG. 6

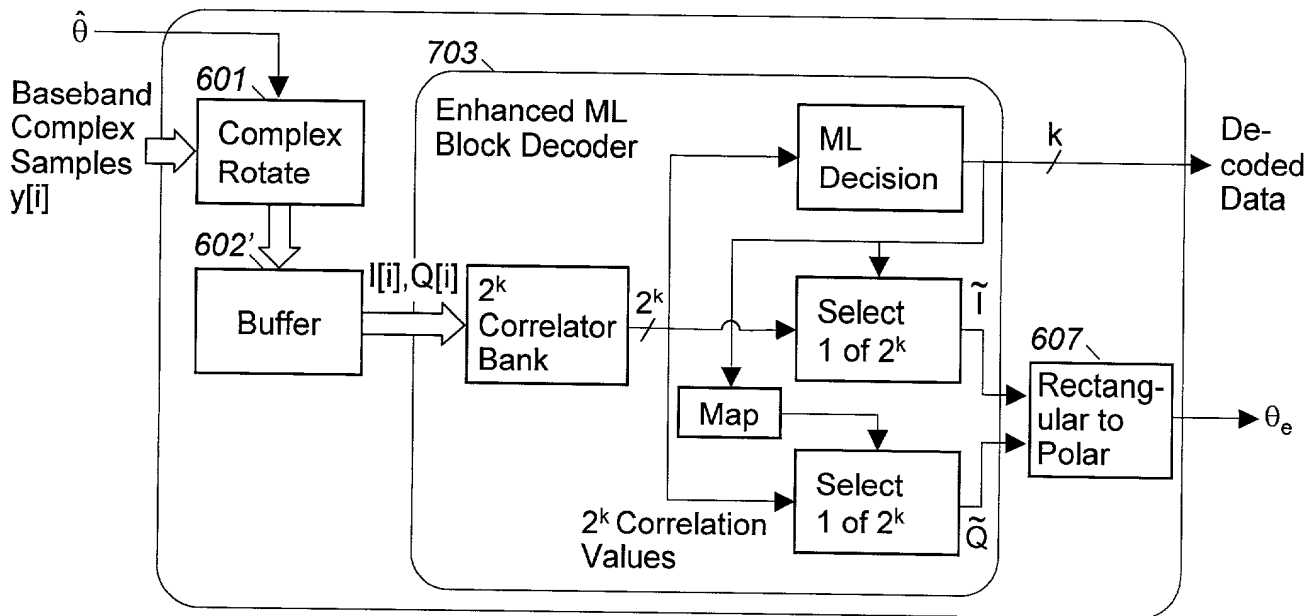


FIG. 7

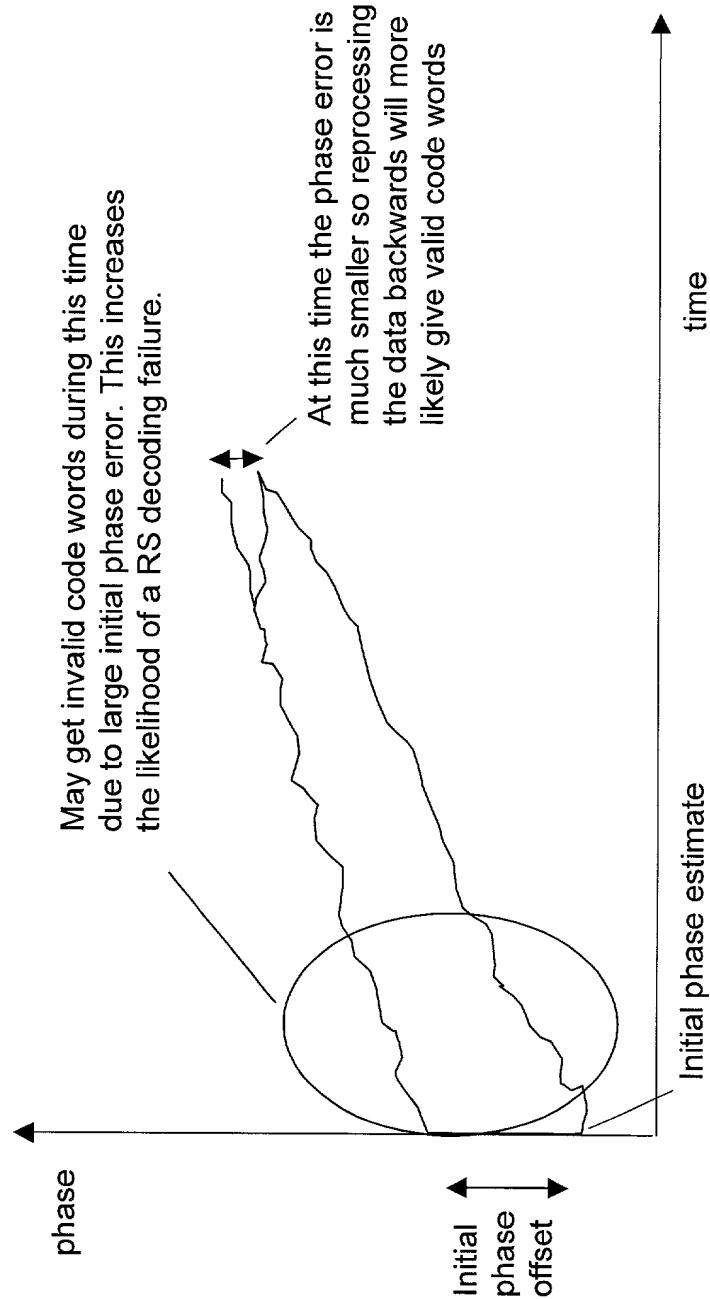


FIG. 8